

#2830 Store at -20°C

Bmi1 Antibody

✓ 100 µl
(10 Western mini-blots)



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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H, R, Mk, (B)	41, 43 kDa	Rabbit**

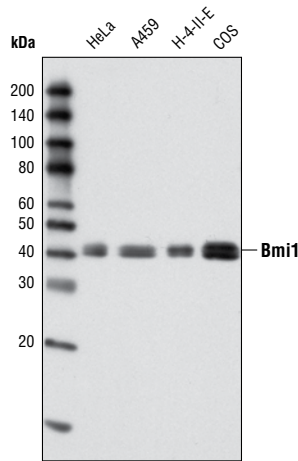
Background: The polycomb group (PcG) proteins contribute to the maintenance of cell identity, stem cell self-renewal, cell cycle regulation and oncogenesis by maintaining the silenced state of genes that promote cell lineage specification, cell death and cell-cycle arrest (1-4). PcG proteins exist in two complexes that cooperate to maintain long-term gene silencing through epigenetic chromatin modifications. The first complex, EED-EZH2, is recruited to genes by DNA-binding transcription factors and methylates histone H3 on Lys27. This histone methyl-transferase activity requires the Ezh2, Eed and Suz12 subunits of the complex (5). Histone H3 methylation at Lys27 facilitates the recruitment of the second complex, PRC1, which ubiquitinylates histone H2A on Lys119 (6). Bmi1 is a component of the PRC1 complex, which together with Ring1 strongly enhances the E3 ubiquitin ligase activity of the Ring2 catalytic subunit (7). Bmi1 plays an important role in the regulation of cell proliferation and senescence through repression of the p16Ink4a and p19Arf genes and is required for maintenance of adult hematopoietic and neural stem cells (3,4,8-10).

Specificity/Sensitivity: Bmi1 Antibody detects endogenous levels of total Bmi1 protein.

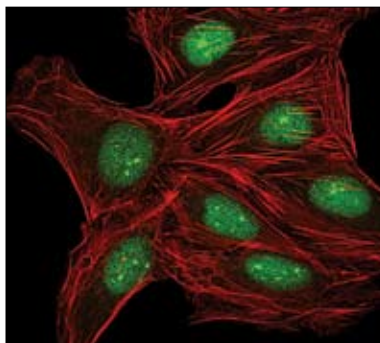
Source/Purification: Polyclonal antibodies are produced by immunizing rabbits with a synthetic peptide (KLH-coupled) corresponding to the carboxy terminus of the human Bmi1 protein. Antibodies are purified by peptide affinity chromatography.

Background References:

- Boyer, L.A. et al. (2006) *Nature* 441, 349–53.
- Lee, T.I. et al. (2006) *Cell* 125, 301–13.
- Park, I.K. et al. (2003) *Nature* 423, 302–5.
- Molofsky, A.V. et al. (2003) *Nature* 425, 962–7.
- Cao, R. and Zhang, Y. (2004) *Mol Cell* 15, 57–67.
- Wang, H. et al. (2004) *Nature* 431, 873–8.
- Cao, R. et al. (2005) *Mol Cell* 20, 845–54.
- Molofsky, A.V. et al. (2005) *Genes Dev* 19, 1432–7.
- Jacobs, J.J. et al. (1999) *Nature* 397, 164–8.
- Jacobs, J.J. et al. (1999) *Genes Dev* 13, 2678–90.



Western blot analysis of extracts from various cell lines using Bmi1 Antibody.



Confocal immunofluorescent analysis of U2-OS cells using Bmi1 Antibody (green). Actin filaments have been labeled with DY-554 phalloidin (red).

Entrez-Gene ID #648
Swiss-Prot Acc. #P35226

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C.
Do not aliquot the antibody.

*Species cross-reactivity is determined by Western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:200

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Companion Products:

- Ezh2 (AC22) Mouse mAb #3147
- Ezh2 Antibody #4905
- Di-Methyl-Histone H3 (Lys27) Antibody #9755
- Tri-Methyl-Histone H3 (Lys27) Antibody #9756
- Histone H3 Antibody #9715
- SirT1 (D739) Antibody #2493
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.